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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,241

07/18/2006

Robert Dean Dally

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PATENT DIVISION

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EXAMINER

COLEMAN, BRENDA LIBBY

ART UNIT

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1624

NOTIFICATION DATE

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ELECTRONIC

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/597,241
Filing Date: July 18, 2006
Appellant(s): DALLY ET AL.

Gilbert T. Voy
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 1, 2010 appealing from the Office action mailed March 26, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-13 and 18-28.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,133,288	Grese	10-2000
6,004,971	Grese	12-1999
5,726,186	Grese	3-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 and 18-28 are rejected under 35 U.S.C. 103(a) as being obvious over GRESE, U.S. Patent No. 6,133,288; 6,004,971; and 5,726,186.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

The generic structure of Grese encompasses the instantly claimed compounds (see Formula I in column 5) as claimed herein. The examples 1, 3-5, 8, 11, 15, 10c, 11b, etc. differ only in the substituents R^1 , R^2 , R^3 , X, Y, W, n and R^4 . Column 5, lines 24-40 defines the substituents as follows: X is -O-, -S-, or -NR⁵-; Y is -CH=CH-; R^1 , R^2 , and R^3 are each independently -H, -OH, -O(C₁-C₄ alkyl), -OCOC₆H₅, -OCO(C₁-C₆ alkyl), -OSO₂(C₄-C₆ alkyl), -OSO₂CF₃, Cl or F; n is 1 or 2; W is CH₂ and R^4 is 1-piperidinyl, methyl-1-pyrrolidinyl, ...1-hexamethyleneimino. The compounds of the instant invention are generically embraced by U.S. '288 (U.S. '186 and U.S. '971) in view of the interchangeability of the substitutions of the tetracyclic ring system. Thus, one of ordinary skill in the art at the time the invention was made would have been motivated to select for example fluoro for the variable R^1 as well as other possibilities from the

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generically disclosed alternatives of the reference and in so doing obtain the instant compounds in view of the equivalency teachings outlined above.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11, 13, 18-26 and 28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S.

Patent No. 5,726,186. Although the conflicting claims are not identical, they are not patentably distinct from each other because the compounds of formula I and II where R¹ is F.

Claims 1-5 and 18-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No.

6,004,971. Although the conflicting claims are not identical, they are not patentably distinct from each other because the compounds of formula I and II where R¹ is F.

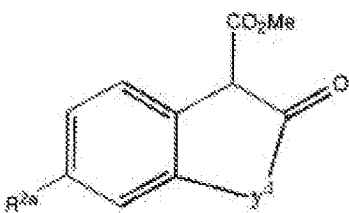
(10) Response to Argument

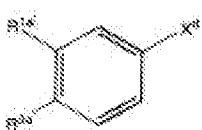
With regards to the 35 U.S.C. § 103, obviousness rejection labeled paragraph 2) in the last office action, the applicant's remarks have been fully considered but they are not persuasive. The applicants' stated that Grese discloses a genus of compounds which includes fluoro as a potential substituent. The applicants' further stated that when one reads beyond the broadest disclosure, Grese teaches a preference for hydroxy or derivatized hydroxy substituted compounds. The applicant raised several places in the reference where Grese described a preferred embodiment as set forth below (which have been labeled to better address each below):

- a. "Preferably, R^{1a} and R^{2a} are methoxy or a suitably protected hydroxyl, R^{3a} is -H, and X' is-O-." Column 9, lines 17-19.
- b. "Preferably R^{1a'} is -OH, R^{3a} is -H, X^d is OH, Y^d is CH₂CH₂, and R^{2a} is methoxy." Column 10, lines 57-58.
- c. "Preferably, R^{1a} and R^{2a} are suitably protected hydroxyls, R^{3a} is H, X is -O-, Y is -O- or -S-, and R⁶ is -C₆H₅." Column 12, lines 31-33.
- d. "In this embodiment of IIIc it is preferable that R^{1a} and R^{2a} are methoxy, R^{3a} is H, X is -N(COC₆H₅)- or -N(COC(CH₃)₄)-, Y is -O-, and R⁶ is preferably -C₂H₅." Column 12, lines 40-44.
- e. "In a preferred embodiment, in which R^{1a} and R^{2a} are t-butyldimethylsilyloxy or methoxy, R^{3a} is H, and G^a is -OSi(CH₃)₄" Column 14, lines 22-25.
- f. "A preferred method for the deprotection of t-butyldimethylsilylethers, a preferred embodiment of R^{1a} and R^{2a}" Column 16, lines 18-20.

- g. "Preferred formula Ia compounds are those in which R^1 and R^2 each are methoxy, or R^1 and R^2 each are hydroxy, R^3 is H, R^4 is piperidinyl or pyrrolidinyl, X is -O-, Y is -S-, W is -CH₂-, and n is 1." Column 16, lines 26-29.
- h. "Preferred formula I compounds from this reaction are the same as those preferred formula I compounds described above " Column 16, lines 61-63.
- i. "Preferred formula VI compounds are those in which R^{1a} and R^{2a} are each individually -H or methoxy, and R^{3a} is -H. Most preferred is the compound in which both R^{1a} and R^{2a} are methoxy." Column 19, lines 36-40.
- j. "For example, when R^{1a} , R^{2a} , and/or R^{3a} of a formula IIe compound are C₁-C₄ alkyl hydroxy protecting groups, such groups can be removed via standard dealkylation techniques to prepare an especially preferred compound of formula IIe. In the most preferred examples of formula II compounds R^1 and R^2 are each individually -H, -OH, or methoxy, Y is -CH=CH-, B is -CH₂-, n is 1, W is -CH₂-, and R^4 is 1-piperidinyl or 1-pyrrolidinyl. An alternative method involves the formation of preferred compounds of formula I or II by replacing the R^1 , R^2 , and/or R^3 hydroxy groups of a formula I or formula II compound with methoxy." Column 21, lines 47-58.
- k. "Other preferred compounds of formula I or II are prepared by replacing the newly formed R^1 , R^2 and/or R^3 hydroxy groups of a formula I or formula II compound with a moiety of the formula -O-CO-(C₁-C₆ alkyl), or -O-SO₂(C₄-C₆ alkyl) "Column 21, lines 62- 66.

One skilled in the art would know that in a reaction of a compound which contains multiple hydroxyl groups that it is necessary to protect the hydroxyl groups where the reaction should not occur. In the preferred embodiments pointed out by the applicant the protected hydroxys are necessary to prevent reaction at those sites. The reaction of the intermediates of formula Vb (preferred embodiment a); the tetralone or

indanone of the formula  is condensed with an appropriately

substituted phenol or thiophenol  (preferred embodiment b); the intermediate of formula IIIc (preferred embodiment c and d); the intermediate of formula Ic (preferred embodiment e); the preferred method for the de-protection of t-butyldimethylsilylethers (preferred embodiment f); the intermediate of formula VI (preferred embodiment i); the intermediate of formula IIe (preferred embodiment j); the process of converting the hydroxyl substituted compounds of formula I and II to the moiety of the formula -O-CO-(C₁-C₆ alkyl) or -O-SO₂(C₁-C₆ alkyl) (preferred embodiment k), etc.

Compounds of the instant invention are within the scope of Grese's formulae I, Ia and Ib and therefore any preferred embodiments with respect to any other formula is not on point. The applicants' attention is drawn to a few other preferred embodiments which are directed to the compounds of formula Ib and formula I, i.e. column 13, lines 5-27, the compounds of formula Ib wherein R^{1a}, R^{2a} and R^{3a} are each independently -H, -O(C₁-C₄ alkyl), -Cl, -F or a suitably protected hydroxyl and column 16, lines 24-25, pharmaceutically active compounds of formula I in which R¹, R² and R³ each are hydrogen, hydroxyl, C₁-C₄ alkoxy, chloro, or **flouro**. The closest compound of Grese is

Example 11b which differs from the compounds of the instant invention by the 8-hydroxy versus an 8-fluoro. In view of the preferred embodiment of formula I where R¹ is only ten possible moieties and thus one of ordinary skill in the art would be motivated to select a fluoro moiety for the variable R¹ as well as other possibilities from the generically disclosed alternatives of the reference and in so doing obtain the instant compounds in view of the preferred embodiments outlined above.

Claims 1-13 and 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over GRESE et al., U.S. Patent No. 6,133,288; 6,004,971; and 5,726,186, for reasons of record and stated above.

Double Patenting

With regards to the nonstatutory obviousness-type double patenting rejection as being unpatentable over claims 1-11, 13, 18-26 and 28 of U.S. Patent No. 5,726,186 labeled paragraph 3) in the last office action, the applicants' stated that based on the applicant's arguments set forth above with respect to the rejection under 35 U.S.C. § 103(a) for being unpatentable over Grese et al., 5,726,186 the applicants reiterate the same arguments set forth therein and respectfully submit that the claimed compounds are not prima facie obvious over U.S. 5,726,186. However as stated above the compounds are prima facie obvious over Grese 5,726,186 and thus the rejection of claims 1-11, 13, 18-26 and 28 are herein maintained.

Claims 1-11, 13, 18-26 and 28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 5,726,186. Although the conflicting claims are not identical, they are not

patentably distinct from each other because the compounds of formula I and II where R¹ is F.

With regards to the nonstatutory obviousness-type double patenting rejection as being unpatentable over claims 1-5 and 18-20 of U.S. Patent No. 6,004,971 labeled paragraph 4) in the last office action, the applicants' stated that based on the applicant's arguments set forth above with respect to the rejection under 35 U.S.C. § 103(a) for being unpatentable over Grese et al., 6,004,971 the applicants reiterate the same arguments set forth therein and respectfully submit that the claimed compounds are not prima facie obvious over U.S. 6,004,971. However as stated above the compounds are prima facie obvious over Grese 6,004,971 and thus the rejection of claims 1-5 and 18-20 are herein maintained.

Claims 1-5 and 18-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,004,971. Although the conflicting claims are not identical, they are not patentably distinct from each other because the compounds of formula I and II where R¹ is F.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Brenda L. Coleman/

Primary Examiner, Art Unit 1624

Conferees:

/James O. Wilson/

Supervisory Patent Examiner, Art Unit 1624

/Joseph K. McKane/

Supervisory Patent Examiner, Art Unit 1626